I. Listing of Claims

The following Listing of the Claims replaces all prior versions, listing and amendments to the claims.

1. (Withdrawn) An isolated antibody or a fragment thereof that binds to an epitope present in the transmembrane domain of polycystin and specifically recognizes a polycystin-related polypeptide having an apparent molecular weight in the range of about 600 to about 800 kD.

2. (Withdrawn) An isolated antibody of claim 1, wherein the polypeptide has an apparent molecular weight of about 600 kD.

3. (Withdrawn) An isolated antibody of claim 1, wherein the polypeptide has an apparent molecular weight of about 800 kD.

4. (Withdrawn) An isolated antibody comprising an epitope, wherein the epitope comprises a peptide having amino acids as shown in Figure 1 (SEQ ID NO: 2) selected from the group consisting of amino acid residues 2621 to 2710, amino acid residues 2734 to 3094, amino acid residues 3116 to 3300, amino acid residues 3364 to 3578, amino acid residues 3623 to 3688, amino acid residues 3710 to 3914, amino acid residues 3931 to 4046, amino acid residues 2166 to 2599, amino acid residues 4097 to 4302, amino acid residues 4148 to 4219, amino acid residues 4220 to 4302, amino acid residues 27 to 360, amino acid residues 843 to 1200, amino acid residues 1205 to 1625, and amino acid residues 1626 to 2136.

5. (Withdrawn) An isolated antibody or a fragment thereof that specifically binds to the transmembrane domain of an integral membrane protein that is associated with polycystic kidney disease, wherein the integral membrane protein also binds to a reference antibody selected from the group consisting of anti-FP-LI, anti-FP-L2, anti-FP-L3, anti-FP-L4, anti-FP-L5, anti-FP-L6, anti-FP-L7, anti-MAL-

REJ antibody, anti-MAL-BD3 antibody, anti-FP-46-2 antibody, anti-FP-46-lc antibody, or anti-FP-LRR antibody.

6. (Withdrawn) An isolated antibody of any of claims 1 to 5, wherein the antibody is a polyclonal antibody.

7. (Withdrawn) An isolated antibody of any of claims 1 to 5, wherein the antibody is a monoclonal antibody.

8. (Withdrawn) An isolated antibody of any of claims 1 to 5 labeled with a detectable label.

9. (Withdrawn) A composition comprising a carrier and an antibody of any of claims 1 to 5.

10. (Withdrawn) A hybridoma cell line that produces the monoclonal antibody of claim 7.

11. (Withdrawn) An isolated antibody of any of claims 1 to 5, wherein the polypeptide or protein is expressed in a tissue selected from the group consisting of kidney, brain, liver and neuronal tissues.

12. (Withdrawn) A recombinant polypeptide comprising a polypeptide fragment of polycystin, wherein the fragment is a membrane-spanning segment of polycystin selected from the group consisting of loop 1, loop 2, loop 3, loop 4 and loop 7.

13. (Withdrawn) A recombinant polypeptide comprising a polypeptide fragment of polycystin, wherein the fragment comprises a peptide having amino acids as shown in Figure 1 (SEQ ID NO: 2) selected from the group consisting of amino acid residues 2621 to 2710, amino acid residues 2734 to 3094, amino acid residues 3116 to 3300, amino acid residues 3364 to 3578, amino acid residues 3623 to 3688, amino acid residues 3710 to 3914, amino acid residues 3931 to 4046, amino acid residues 2166 to

2599, amino acid residues 4097 to 4302, amino acid residues 4148 to 4219, amino acid residues 4220 to 4302, amino acid residues 27 to 360, amino acid residues 843 to 1200, amino acid residues 1205 to 1625, and amino acid residues 1626 to 2136.

14. (Withdrawn) A composition comprising a carrier and a polypeptide of claim 13.

15. (Withdrawn) An isolated polynucleotide encoding the recombinant polypeptide of claim 13.

16. (Withdrawn) A gene delivery vehicle comprising the polynucleotide of claim 16.

17. (Withdrawn) A host cell transformed with the isolated polynucleotide of claim 16.

18. (Withdrawn) An isolated polypeptide having an apparent molecular weight in the range of about 600 to about 800 kD that specifically binds to an antibody or fragment thereof of claim 1.

19. (Withdrawn) An isolated polypeptide of claim 19, wherein the polypeptide has an apparent molecular weight of about 600 kD.

20. (Withdrawn) The isolated polypeptide of claim 19, wherein the polypeptide has an apparent molecular weight of about 800 kD.

21. (Withdrawn) A diagnostic kit for detecting a polycystin-related polypeptide present in a sample, comprising an antibody of any of claims 1 to 5, and instructions for the use of the antibody to detect the polypeptide.

22. (Currently Amended) A method for ~~modulating~~ inhibiting polycystin -1 mediated cell-cell adhesion in a ~~suitable~~ tissue having a cell expressing a polycystin-1 receptor, comprising delivering to the tissue an effective amount of an

antibody or a fragment thereof that specifically recognizes and binds a polycystin-1 polypeptide having an apparent molecular weight in the range of about 600 to about 800 kD ~~agent that modulates the binding of polycystin in~~ thereby inhibiting polycystin-1 mediated cell-cell adhesion in the tissue.

23. (Withdrawn) The method of claim 22, wherein the modulation of cell-cell or cell-matrix adhesion is a reduction of cell-cell or cell-matrix adhesion.

24. (Withdrawn) The method of claim 24, wherein the agent prevents or inhibits transcription and/or translation of a polycystin polypeptide in a cell.

25. (Withdrawn) The method of claim 24, wherein the agent is an antisense polynucleotide to an isolated polynucleotide of claim 16.

26. (Withdrawn) The method of claim 24, wherein the agent is a ribozyme that inhibits translation of an isolated polynucleotide of claim 16.

27. (Canceled)

28. (Withdrawn) The method of claim 28, wherein an effective amount of a polycystin Ig-like domain is delivered to the cell or tissue.

29. (Canceled)

30. (New) The method of claim 22, wherein the polycystin-1 polypeptide has an apparent molecular weight of about 600 kD.

31. (New) The method of claim 22, wherein the polycystin-1 polypeptide has an apparent molecular weight of about 800 kD.

32. (New) The method of claim 22, wherein the antibody comprises an epitope, wherein the epitope comprises a peptide having amino acids as shown in SEQ ID NO: 2 selected from the group consisting of amino acid residues 2621 to

2710, amino acid residues 2734 to 3094, amino acid residues 3116 to 3300, amino acid residues 3364 to 3578, amino acid residues 3623 to 3688, amino acid residues 3710 to 3914, amino acid residues 3931 to 4046, amino acid residues 2166 to 2599, amino acid residues 4097 to 4302, amino acid residues 4148 to 4219, amino acid residues 4220 to 4302, amino acid residues 27 to 360, amino acid residues 843 to 1200, amino acid residues 1205 to 1625, and amino acid residues 1626 to 2136.

33. (New) The method of claim 22, wherein the antibody or a fragment thereof that specifically binds to the transmembrane domain of an integral membrane protein that is associated with polycystic kidney disease, wherein the integral membrane protein also binds to a reference antibody selected from the group consisting of anti-FP-LI, anti-FP-L2, anti-FP-L3, anti-FP-L4, anti-FP-L5, anti-FP-L6, anti-FP-L7, anti-MAL-REJ antibody, anti-MAL-BD3 antibody, anti-FP-46-2 antibody, anti-FP-46-Ic antibody, or anti-FP-LRR antibody.

34. (New) The method of claim 22 or 23, wherein the antibody is a polyclonal antibody.

35. (New) The method of claim 22 or 23, wherein the antibody is a monoclonal antibody.

36. (New) The method of claim 22 or 23, wherein the antibody is labeled with a detectable label.

37. (New) The method of claim 22, wherein the antibody is a monoclonal antibody.

38. (New) The method of claim 22, wherein the antibody is an antibody selected from the group consisting of GST-Ig^{a}, GST-Ig^{b} and GST-Ig^{c}.

39. (New) The method of claim 22, wherein the tissue comprises MDCK cells *in vitro*.

40. (New) A method for promoting cell-cell adhesion is a tissue in need thereof comprising delivering to the tissue an effective amount of a polynucleotide encoding polycystin-1 protein or polypeptide (SEQ ID NO.: 2) to the tissue.

41. (New) The method of claim 40, wherein the tissue comprises MDCK cells *in vitro*.